

source, a grid pattern source, a planar flood field, and a shaped three-dimensional flood field,

measuring the level of radiation emitted from the source that is detected by the detection system, and

calibrating the detection system by evaluating the detected radiation and balancing the system based upon the detected radiation.

58. (Original) The method of Claim 57 further comprising:

measuring an energy-dependent modulation transfer function of the detection system, and

calibrating the system by accounting for both the detected radiation and the energy-dependent modulation transfer function.

59. (Amended) A method of estimating the effects of tissue attenuation on the intensity and energy distribution of a an x-ray beam comprising:

calibrating an energy-resolving detector array by determining its energy-dependent modulator transfer function,

aligning the calibrated energy-resolving detector array with the x-ray beam,

measuring a first position-dependent, energy-dependent intensity profile of the x-ray beam at the detector array,

transmitting the x-ray beam through a patient,